

## NDE Big Data Framework, Phase II

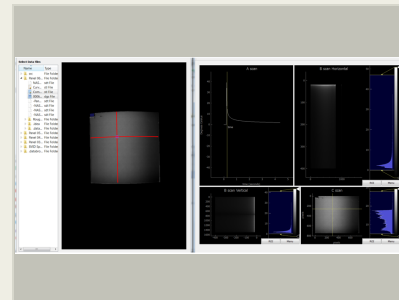
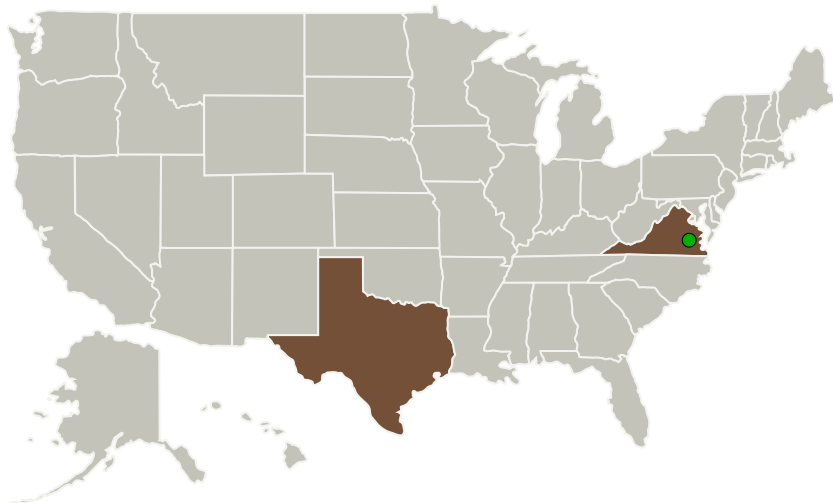
Completed Technology Project (2016 - 2018)



## Project Introduction

NDE data has become ?Big Data?, and is overwhelming the abilities of NDE technicians and commercially available tools to deal with it. In the current state of the art in industrial practice, there is no integration of the NDE data into design data, NDE models, and structural integrity models for a holistic structural capability assessment. Our proposal responds to these issues described in the subtopic H13.01, Advanced NDE Modeling and Analysis. The innovations provided by the NDEToolbox? are: 1. Context-based data browsing and retrieval for diverse sets of large data. 2. Automated data analysis / reduction algorithms for aerospace composites. 3. Data fusion algorithms enabling the use of data from design, modeling (NDE and structural), and multiple NDE methods for the improved quantification of defects. 4. A plug-in architecture enabling further expansion

## Primary U.S. Work Locations and Key Partners



NDE Big Data Framework, Phase II

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Organizations Performing Work	Role	Type	Location
Texas Research International, Inc.	Lead Organization	Industry	Texas
● Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia
Texas Research Institute Austin, Inc.	Supporting Organization	Industry	Austin, Texas

Primary U.S. Work Locations	
Texas	Virginia

## Project Transitions

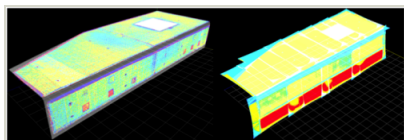
▶ **May 2016:** Project Start

✓ **October 2018:** Closed out

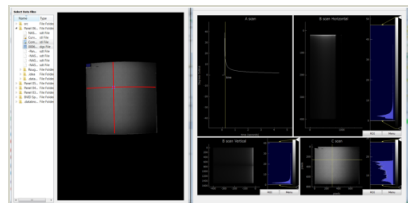
**Closeout Documentation:**

- Final Summary Chart(<https://techport.nasa.gov/file/139719>)

## Images

**Briefing Chart Image**

NDE Big Data Framework, Phase II  
(<https://techport.nasa.gov/image/130434>)

**Final Summary Chart Image**

NDE Big Data Framework, Phase II  
(<https://techport.nasa.gov/image/135492>)

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Organization:**

Texas Research International, Inc.

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

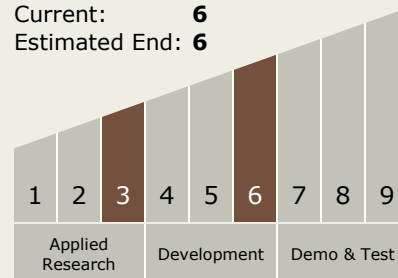
David S Forsyth

## Technology Maturity (TRL)

Start: **3**

Current: **6**

Estimated End: **6**



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### Technology Areas

#### Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - └ TX11.4 Information Processing
    - └ TX11.4.1 Science, Engineering, and Mission Data Lifecycle

### Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System